Abstract Preview

Is long-term topical tacrolimus therapy safe? A case of Sezary syndrome girl found during three years of topical tacrolimus therapy for "atopic" dermatitis

Shimazu, T[1]; Imanaka, A[2]; Satoh, K[2]
[1]Shimazu Clinic, Allergology and Pediatrics, Kyoto, Japan; [2]Kinki Central Hospital of the Mutual Aid Association of Public School Teachers, Dermatology, Itami, Japan

A study on a 16 year-old girl with Sezary syndrome (SS). The girl visited our clinic in August 2003 with severe generalized erythroderma and systemic lymphadenopathy. She had earlier been receiving treatment with topical tacrolims (TAC) for 3 years prior to her first visit. At the age of 9, in1996, eczema had developed on her face and elbow joints similar to atopic dermatitis (AD). She had been treated with topical and/or systemic steroids. After receiving a folk remedy and withdrawal from steroids, her condition rapidly deteriorated and she developed severe pruritus and erythroderma at the end of 1998. Due to the suspicion of mycosis fungoides (MF), two skin biopsies had been performed prior to the commencement of topical TAC therapy in November 1999 and March 2000, but no histological picture suspecting cutaneous T-cell lymphoma (CTCL) was detected. In addition, a topical TAC therapy with 0.075 to 0.020% of TAC ointment was prescribed for her face twice a day for a period of 3 years. An oral immunosuppressant (OI) had also been prescribed for 2 months prior to her first visit. On her first visit, CD4+ atypical lymphocytes with cerebriform nuclei referred to Sezary cells (SCs) were found in the peripheral blood in the number of 13,900/mm3 (69% of white cells) and were also found in the dermis. Our retrospective study showed SCs had been found in 50% of peripheral white cells already one month prior to the OI prescription. HTLV-1 antibody was not detected, although T-cell receptor gene rearrangement was found. Her condition was diagnosed as 4a (T4, N3, M0, B1) of SS. SS is uncommon in children and young adults. More recently however, topical TAC has been used in the treatment of AD children. Animal studies have shown that long-term topical TAC therapies increase the risk of cancer and/or malignant lymphoma statistically higher in both 0.1% and 0.03% of TAC ointment compared with vehicle ointment. Although we have not been able to determine exactly when our patient developed CTCL or when preneoplastic reactive inflammatory condition developed into CTCL, it cannot be denied long-term topical TAC therapy may have had the potential to increase the level of CTCL in a few years to stage 4a of SS through treatment iatrogenically. In AD treatment with topical TAC, CTCL should be carefully ruled out before and during the treatment phase. A follow-up study on potential long-term adverse effects of topical TAC regarding malignancies and CTCL is strongly recommended.

Close